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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Jared L. Zerbe et al.

Confirmation No.: 2374

Serial No.: 09/478,916

Art Unit: 2189

Filed: January 6, 2000

Examiner: Tim T. Vo

For: Low Latency Multi-Level
Communication Interface

Attorney Docket No.: 9797-0050-999

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INFORMATION DISCLOSURE STATEMENT

NOV 20 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Technology Center 2100

Sir:

In accordance with the duty of disclosure provisions of 37 C.F.R. §1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the application.

1. Enclosures accompanying this Information Disclosure Statement are:

1a. ☒ A list of all patents, publications, applications, or other information submitted for consideration by the office.

1b. A legible copy of :

☒ Each U.S. patent application publication and U.S. and foreign patent;

☒ Each publication or that portion which caused it to be listed on the PTO-1449;

☐ For each cited pending U.S. application, the application specification including the claims, and any drawing of the application, or portion of the application which caused it to be listed on the PTO-1449 including any claims directed to that portion;

☐ all other information or portion which caused it to be listed on the PTO-1449.

1c. ☐ An English language copy of search report(s) from a counterpart foreign application or PCT International Search Report.

1d. ☐ Explanations of relevancy (ATTACHMENT 1(d), hereto) or English language abstracts of the non-English language publications.

2. ☒ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(b):

☐ Within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);

- ☐ Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
- ☐ Before the mailing of the first Office action on the merits;
- ☒ Before the mailing of a first Office action after the filing of a request for continued examination under §1.114.

3. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(c) after the period specified in 37 C.F.R. §1.97(b), but before the mailing date of any of a final action under 37 C.F.R. §1.113, a notice of allowance under 37 C.F.R. §1.311 or an action that otherwise closes prosecution in the application.

(Check either Item 3a or 3b)

- 3a. ☐ The Certification Statement in Item 5 below is applicable. Accordingly, no fee is required.
- 3b. ☐ The \$180.00 fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is:
☐ enclosed
☐ to be charged to Pennie & Edmonds LLP Deposit Account No. 16-1150.

(Item 3b to be checked if any reference known for more than 3 months)

4. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(d) after the period specified in 37 C.F.R. §1.97(c), but on or before the date of payment of the issue fee.

The Certification Statement in Item 5 below is applicable.

The \$180.00 fee set forth in 37 C.F.R. §1.17(p) is:

- ☐ enclosed.
☐ to be charged to Pennie & Edmonds LLP Deposit Account No. 16-1150.

5. ☐ Certification Statement (applicable if Item 3a or Item 4 is checked)

(Check either Item 5a or 5b)

- 5a. ☐ In accordance with 37 C.F.R. §1.97(e)(1), it is certified that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- 5b. ☐ Each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- 5c. ☐ Pursuant to 37 C.F.R. §1.704(d), each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.


6. ☐ This application is a continuation application under 37 C.F.R. §1.60 or §1.53(b) or (d).

(Check appropriate Items 6a, 6b and/or 6c)

- 6a. ☐ A Petition to Withdraw from issue under 37 C.F.R. §1.313(b)(5) is concurrently filed herewith.
- 6b. ☐ Copies of publications listed on Form PTO-1449 from prior application Serial No. _____, filed on _____, of which this application claims priority under 35 U.S.C. §120, are not being submitted pursuant to 37 C.F.R. §1.98(d).
- 6c. ☐ Copies of the publications listed on Form PTO-1449 were not previously cited in prior application Serial No. _____, filed on _____, and are provided herewith.
7. ☐ This is a Supplemental Information Disclosure Statement. (Check Item 7a)
- 7a. ☐ This Supplemental Information Disclosure Statement under 37 C.F.R. §1.97(f) supplements the Information Disclosure Statement filed on _____. A bona fide attempt was made to comply with 37 C.F.R. §1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental Information Disclosure Statement can be considered as if properly filed on _____.
8. ☐ In accordance with 37 C.F.R. §1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:
- (Check Item 8a, 8b, or 8c)
- 8a. ☐ satisfied because all non-English language publications were cited on the enclosed English language copy of the PCT International Search Report or the search report from a counterpart foreign application indicating the degree of relevance found by the foreign office.
- 8b. ☐ set forth in the application.
- 8c. ☐ enclosed as an attachment hereto.
9. ☒ The Commissioner is authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement and/or Petition to Pennie & Edmonds LLP Deposit Account No. 16-1150.
10. ☒ No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than a search report of a foreign counterpart application or PCT International Search Report if submitted herewith). 37 C.F.R. §§1.97(g) and (h).

Respectfully submitted,

Date: November 14, 2003



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INFORMATION DISCLOSURE CITATION

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Complete If Known

Application Number	09/478,916
Filing Date	January 6, 2000
First Named Inventor	Jared L. Zerbe et al.
Art Unit	2189
Examiner Name	Tim T. Vo
Attorney Docket Number	9797-0050-999

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	US 2001/0010712 A1	8/2/01	Hedberg			
	US 2001/0016929 A1	8/23/01	Bonneau et al.			
	US 2001/0019584 A1	9/6/01	Azazzi et al.			
	US 2001/0021987 A1	9/13/01	Govindarajan et al			
	4,481,625	11/6/84	Roberts et al.			
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	5,046,050	9/3/91	Kertis			
	5,126,974	6/30/92	Sasaki et al.			
	5,153,459	10/6/92	Park et al.			
	5,295,157	3/15/94	Suzuki et al.			
	5,373,473	12/13/94	Okumura			
	5,508,570	4/16/96	Laber et al.			
	5,534,795	7/9/96	Wert et al.			
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Examiner
Signature

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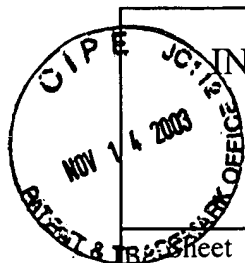
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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
YES	NO						
		JP10200345	7/31/98	Japan			X
		WO 98/33306	7/30/98	WIPO			X
		WO 99/10982	3/4/99	WIPO			

	Ariyavisitakul, S., "Reduced-Complexity Equalization Techniques for broadband wireless Channels," (1997), <i>IEEE Journal on Selected Areas in Communications</i> , 15(1), pp. 5-15.
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	Azdet, K., et al., "A Gigabit Transceiver Chip Set for UTP CAT-6 Cables in Digital CMOS Technology," (2000), <i>IEEE International Solid State Circuits Conference</i> , pp. 306-307.
	Cova, S.D., et al., "Characterization of Individual Weights in Transversal Filters and Application to CCD's," (1982), <i>IEEE Journal of Solid State Circuits</i> , SC17(6), pp. 1054-1061.
	Dally, W.J., et al., "Multi-gigabit Signaling with CMOS," (5/12/97), <i>DARPA funded presentation</i> , (22 pages).
	Fiedler, A., et al., "A 1.0625Gbps Transceiver with 2x-Oversampling and Transmit Signal Pre-Emphasis," (2/1997), <i>IEEE/ISSCC</i> .

Examiner Signature	Date Considered
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Sheet 4 of 4

	Kuczynski, M.A., et al., "A 1Mb/s Digital Subscriber Line Transceiver Signal Processor," (1999), <i>IEEE Digital and Video Signal Processing/ISSCC</i> , pp. 26-32.
	Perez-Alvarez, I.A., et al., "A Differential Error Reference Adaptive Echo Canceller for Multilevel PAM Line Codes," (1996), <i>IEEE</i> , pp. 1707-1710.
	Raghavan, S.A., et al., "Nonuniformly Spaced Tapped-Delay-Line Equalizers," (1993), <i>IEEE Transactions on Communications</i> , 41(9), pp. 1290-1295.
	Thompson, G., "How 1000BASE-T Works," (1997), <i>Presentation at IEEE 802.3 Plenary Session</i> , (7 pages).
	Yang, K., et al., "A Scalable 32Gb/s Parallel Data Transceiver with On-Chip Timing Calibration Circuits," (2000), <i>IEEE International Solid State Circuits Conference</i> , pp. 258-259.
	"4 Modulation Schemes for High Bit Rate Data Transmission in the Loop Plant," (4/19/01), www.bib.frlippe.de/voltext/dipl/schlegd/chapter4.htm .
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	"Servo Control of Analog Power Supplies Purpose Interface Card," IBM Technical Disclosure Bulletin (April 1993), pp. 1-5 (Vol. 36, Issue 4, pages 283-286).
	IEEE - 802.3ab - A Tutorial Presentation, March 1998.
	IEEE - P802.3ad-Draft Supplement to Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method & Physical Layer Specifications: Link Aggregation," (1999).

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